



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

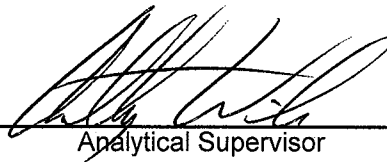
Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00003058  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00003058001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/29/2009 09:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.77 pH Units  
**Chlorine, residual:**  
**Conductivity:** 131 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 11.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	69	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	26	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.25J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.11J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	68	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.11J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	2.3J	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/29/2009 09:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.77 pH Units  
**Chlorine, residual:**  
**Conductivity:** 131 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 11.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00003058002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/29/2009 09:58  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 13.03  
**Dissolved Oxygen:** 11.18 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	220	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	27	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.22J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	0.74J	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.89J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	65	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	15	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	38	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/29/2009 09:58  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 13.03  
**Dissolved Oxygen:** 11.18 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00003058003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/29/2009 10:14  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.13 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 12.86  
**Dissolved Oxygen:** 10.72 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	310	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	290	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	2.4J	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	35	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.37J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	0.80J	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.54J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	69	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	5.9	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/29/2009 10:14  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.13 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 12.86  
**Dissolved Oxygen:** 10.72 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00003058004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 10/29/2009 10:25  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.11 pH Units  
**Chlorine, residual:**  
**Conductivity:** 58 uMHO  
**Temperature:** 13.16  
**Dissolved Oxygen:** 10.82 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	340	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	380	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	4.1J	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	41	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.44J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	1.2	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.69J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	69	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	3.8J	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	10/30/2009



Lab-Sample Number: K00003058004  
Project Name: TVA-Ash Spill  
Sample Description: Emory River mile 1.7  
Sampler Project Name: TVA Ash Spill  
Project Site No.: 3  
Station No.: EMORY001.7RO  
Date/Time Collected: 10/29/2009 10:25  
Sampler's Name: Geoff Klein  
County: ROANE - 73  
Sample Matrix: Water  
EFO: Knoxville  
Sampling Agency: TDEC-WPC  
Billing Code: 327.34-20  
Send Report To: TDEC-WPC  
Agency Invoiced: TDEC-WPC  
Priority Date: 11/09/2009  
Date/Time Received: 10/29/2009 12:00  
Received By: E McCrary

Field Determinations  
pH: 7.11 pH Units  
Chlorine, residual:  
Conductivity: 58 uMHO  
Temperature: 13.16  
Dissolved Oxygen: 10.82 mg/L  
Other:  
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected

**Lab-Sample Number:** K00003058005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/29/2009 10:35  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 63 uMHO  
**Temperature:** 13.72  
**Dissolved Oxygen:** 11.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Iron	330	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Aluminum	390	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	4.8J	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	42	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.45J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	1.2	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.74J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	67	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.6	µg/L	0.25	1	M, Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.08J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	2.5J	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/29/2009 10:35  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 63 uMHO  
**Temperature:** 13.72  
**Dissolved Oxygen:** 11.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00003058006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/29/2009 10:56  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.57 pH Units  
**Chlorine, residual:**  
**Conductivity:** 219 uMHO  
**Temperature:** 14.42  
**Dissolved Oxygen:** 9.71 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	120	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	0.57J	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	2.2J	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	39	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.32J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	0.45J	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.23J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	31	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.04J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	3.7J	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/29/2009 10:56  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.57 pH Units  
**Chlorine, residual:**  
**Conductivity:** 219 uMHO  
**Temperature:** 14.42  
**Dissolved Oxygen:** 9.71 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009	

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00003058007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/29/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.53 pH Units  
**Chlorine, residual:**  
**Conductivity:** 74 uMHO  
**Temperature:** 13.46  
**Dissolved Oxygen:** 11.13 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	310	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	440	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	2.0	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	17	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	50	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.40J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	2.2	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.66J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	63	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	3.5J	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	0.12J	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	14	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	4.4J	µg/L	1.9	5	M Pattanayek	10/30/2009

**Lab-Sample Number:** K00003058007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/29/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.53 pH Units  
**Chlorine, residual:**  
**Conductivity:** 74 uMHO  
**Temperature:** 13.46  
**Dissolved Oxygen:** 11.13 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MLQ  
 MDL - Method Detection Limit  
 MLQ - Method Quantitation Limit  
 U - Undetected

<b>Lab-Sample Number:</b>	K00003058008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.52      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	237      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	14.62
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	9.31      mg/L
<b>Date/Time Collected:</b>	10/29/2009    10:45	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	11/09/2009		
<b>Date/Time Received:</b>	10/29/2009    12:00		
<b>Received By:</b>	E McCrary		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/30/2009				M Pattanayek	10/30/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	92	µg/L	2.9	10	A Wilson	11/2/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	65	µg/L	6.4	10	M Pattanayek	10/30/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/30/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/30/2009
Barium	36	µg/L	2.5	5	M Pattanayek	10/30/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/30/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/30/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/30/2009
Cobalt	0.16J	µg/L	0.04	1	M Pattanayek	10/30/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/30/2009
Lead	0.16J	µg/L	0.10	1	M Pattanayek	10/30/2009
Manganese	27	µg/L	0.42	1	M Pattanayek	10/30/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	10/30/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/30/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/30/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/30/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/30/2009
Zinc	2.1J	µg/L	1.9	5	M Pattanayek	10/30/2009



<b>Lab-Sample Number:</b>	K00003058008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.52      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	237      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	14.62
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	9.31      mg/L
<b>Date/Time Collected:</b>	10/29/2009    10:45	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	11/09/2009		
<b>Date/Time Received:</b>	10/29/2009    12:00		
<b>Received By:</b>	E McCrary		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/3/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534


Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00003058  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
\_\_\_\_\_  
Analytical Supervisor

**Lab-Sample Number:** K00003058001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/29/2009 09:09  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.77 pH Units  
**Chlorine, residual:**  
**Conductivity:** 131 uMHO  
**Temperature:** 13.48  
**Dissolved Oxygen:** 11.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	18	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	21	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00003058002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/29/2009 09:58  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 13.03  
**Dissolved Oxygen:** 11.18 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	14	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	18	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00003058003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/29/2009 10:14  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.13 pH Units  
**Chlorine, residual:**  
**Conductivity:** 56 uMHO  
**Temperature:** 12.86  
**Dissolved Oxygen:** 10.72 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	20	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	18	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peebles	10/30/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00003058004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 10/29/2009 10:25  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.11 pH Units  
**Chlorine, residual:**  
**Conductivity:** 58 uMHO  
**Temperature:** 13.16  
**Dissolved Oxygen:** 10.82 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	21	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	21	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	19	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00003058005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/29/2009 10:35  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.22 pH Units  
**Chlorine, residual:**  
**Conductivity:** 63 uMHO  
**Temperature:** 13.72  
**Dissolved Oxygen:** 11.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	23	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	22	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00003058006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/29/2009 10:56  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.57 pH Units  
**Chlorine, residual:**  
**Conductivity:** 219 uMHO  
**Temperature:** 14.42  
**Dissolved Oxygen:** 9.71 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**Lab-Sample Number:** K00003058007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/29/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:** 11/09/2009  
**Date/Time Received:** 10/29/2009 12:00  
**Received By:** E McCrary

**Field Determinations**  
**pH:** 7.53 pH Units  
**Chlorine, residual:**  
**Conductivity:** 74 uMHO  
**Temperature:** 13.46  
**Dissolved Oxygen:** 11.13 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	24	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	27	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

<b>Lab-Sample Number:</b>	K00003058008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.52 pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley F	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	237 uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	14.62
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	9.31 mg/L
<b>Date/Time Collected:</b>	10/29/2009 10:45	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>	11/09/2009		
<b>Date/Time Received:</b>	10/29/2009 12:00		
<b>Received By:</b>	E McCrary		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	120	mg/L	3.8	10	M Chen	11/3/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	98	mg/L	0.7	1	M Chen	11/2/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/30/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/30/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**